

## Alfriston School Design & Technology Curriculum Cycle

Pearl Class (Reception) - EYFS Expressive Arts & Design					
Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
<p style="text-align: center; color: red;"><b>Marvellous me!</b></p> <p><b>Drawing/Painting</b> <u>Frida Kahlo</u> Self-portraits. Drawings of family. Drawing familiar places inspired by 'Coming from the Mill' by <u>L S Lowry</u>. Drawings of autumn treasures. Fire engine inspired painting. Colour mixing. Introduction to junk modelling. Leaf printing.</p>	<p style="text-align: center; color: red;"><b>Let's Celebrate</b></p> <p><b>Sculpture, collage, printing, textiles – pattern, form &amp; space</b> Clay Diwali lamp. <u>Henry Moore</u> sculpture as inspiration for experimenting with clay. Fireworks: Pastel; Splatter paint images; Chalk drawings; Wax resist. Drawing/painting/collaging Owls. Repeating pattern printed wrapping paper. Handprint Christmas cards. Simple Christmas decoration sewing. Junk modelling props for Christmas Play/ Role-play.</p>	<p style="text-align: center; color: red;"><b>Off we go!</b></p> <p><b>Printing – line, shape</b> Chinese paper lamp. <u>Claude Monet</u> transport art <u>Spencer Gore</u> (Brighton pier/Letchworth station). Easter basket weaving. Planet printing. Car wheel printing/mark making. Car with wheels.</p>	<p style="text-align: center; color: red;"><b>The Bear Necessities</b></p> <p><b>Drawing, sculpture, collage, textiles - texture</b> <u>Helen Chadwick</u> cat drawings as inspiration for Charcoal Bear drawings. Bear hunt collages. Baby bear chair junk modelling. Bear puppet sewing.</p>	<p style="text-align: center; color: red;"><b>Glorious Growing</b></p> <p><b>Sculpture, collage, painting, textiles – colour, shape</b> Clay mini beast <u>Henri Matisse</u> snail collage art. <u>Van Gogh</u> painting food art/flowers. Arcimboldi food art. Nature weaving with sticks, leaves and string. Collecting photos of healthy foods. Leaf rubbing bunting with sewn edges.</p>	<p style="text-align: center; color: red;"><b>Ahoy, there!</b></p> <p><b>Drawing/ Painting/ Printing – line, shape</b> <u>Raoul Dufy</u> <u>J M W Turner</u> <u>Hokusai</u> Painting the sea/beach. Exploring beach photography.</p>
<ul style="list-style-type: none"> <li>• Weekly opportunities for observational drawings using a variety of media (link with Understanding the World).</li> <li>• Weekly opportunities to develop junk modelling skills (joining materials, using different tools, working imaginatively, talking about their creations, creating for role play)</li> </ul>					

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Ruby Class (Year 1 & 2) – Key Stage 1					
Cycle A - Term 1	Cycle A - Term 2	Cycle A - Term 3	Cycle A - Term 4	Cycle A - Term 5	Cycle A - Term 6
<p style="text-align: center;"><b>Explorers</b></p> <p style="text-align: center;"><b>Freestanding &amp; stable structures - Floating Ship</b></p> <p>Talk about realistic ideas. Draw labelled pictures. Give simple verbal or written instructions. Model ideas. Consider purpose and appeal for audience. Evaluate against design criteria. Evaluate and explore a range of existing products. Suggest improvements and next steps. Learn about designers/ inventors. Create stable, free standing structures by tearing, folding, cutting... card + combining materials to strengthen. Use fixed joins + hinges.</p>	<p style="text-align: center;"><b>Around the World</b></p> <p style="text-align: center;">N/A</p>	<p style="text-align: center;"><b>Dinosaurs</b></p> <p style="text-align: center;"><b>Mechanisms - Harry and Dinosaurs pop up bucket slider</b></p> <p>Make models including simple levers and sliders, pop ups or hinges. Use a hole punch or stapler.</p>	<p style="text-align: center;"><b>Giants</b></p> <p style="text-align: center;"><b>Mechanisms - Fairy Tale Wheel</b></p> <p>Talk about realistic ideas. Draw labelled pictures. Give simple verbal or written instructions. Model ideas. Consider purpose and appeal for audience. Make models including simple winding mechanism. Make models including simple levers and sliders, pop ups or hinges.</p>	<p style="text-align: center;"><b>Growing</b></p> <p style="text-align: center;"><b>Textiles -</b></p> <p>Use large eyed needles to complete running stitches. Cut and shape fabric using scissors. Apply shapes with glue or stitching. Decorate with beads and buttons. Apply colour by printing, dipping and fabric crayons.</p>	<p style="text-align: center;"><b>The Seaside</b></p> <p style="text-align: center;"><b>Freestanding &amp; stable structures</b></p> <p>Experiment with constructing and joining using recycled and man-made materials – wood, rolled up paper, straws, card, boxes... Combine materials to strengthen. Use fixed joins. Use a hole punch/stapler/saws.</p>

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<p>Use a hole punch/ stapler.</p> <p><b>Food &amp; Nutrition – sandwich</b></p> <p>Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from.</p>					
<b>Cycle B - Term 1</b>	<b>Cycle B - Term 2</b>	<b>Cycle B - Term 3</b>	<b>Cycle B - Term 4</b>	<b>Cycle B - Term 5</b>	<b>Cycle B - Term 6</b>
<p>Down Under N/A</p>	<p style="text-align: center;">Fire</p> <p><b>Food – Christmas Biscuit and fruit salad</b></p> <p>Know about healthy diets Cut, peel and grate ingredients safely. Measure food using measuring cups or scales Understand where food comes from.</p> <p><b>Structures – Tudor London buildings</b></p> <p>Mark out and cut accurately and safely with scissors. Demonstrate a range of shaping techniques – tearing, folding... Use temporary joins – split pins, treasury tags... Use fixed joins.</p>	<p>Winter Wonderland N/A</p>	<p style="text-align: center;">Space</p> <p><b>Textiles – sewing underpants!</b></p> <p>Use large needles to complete running stitches. Cut and shape fabric with scissors. Apply shapes with glue or stitching. Decorate with beads, buttons, feathers.</p> <p><b>Mechanisms - Winding alien spaceship</b></p> <p>Make models including simple winding mechanism.</p>	<p>Green N/A</p>	<p>It's a Bug's Life N/A</p>

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Sapphire Class (Year 3 & 4) – Lower Key Stage 2					
Cycle A - Term 1	Cycle A - Term 2	Cycle A - Term 3	Cycle A - Term 4	Cycle A - Term 5	Cycle A - Term 6
<p>The Sound Collector N/A</p>	<p>Meet the Flintstones N/A</p>	<p>Romans – Escape from Pompeii N/A</p>	<p>Romans – The Empire Strikes Back <b>Mechanisms – levers, linkages; pneumatics</b> <u>Design</u> Use different information sources. Consider purpose, audience, appearance. Consider conservation of materials. Use annotated sketches, lists. Plan a sequence of actions. Assemble and rearrange a range of materials and components to model ideas. <u>Make</u> Mark out and cut accurately using standard measures. Use simple joining, shaping and finishing techniques to construct products. Use tools with greater accuracy and control – saws, needles, knives. Use materials with awareness to functional</p>	<p>Tales from Europe <b>Electrical systems – switches, bulbs, buzzers</b> <u>Design</u> Use different information sources. Use annotated sketches, lists. Plan a sequence of actions. Assemble and rearrange a range of materials and components to model ideas. <u>Technical Knowledge</u> Create models with electrical systems – switches, bulbs, buzzers. <u>Evaluation</u> Evaluate against design criteria – purpose, appearance, conservation of materials. Consider the view of others to improve work.</p>	<p><b>Much Ado About Nothing</b> <b>Textiles</b> Use smaller eyed needles and finer threads. Master a back stitch. Develop skills in stitching, cutting, joining. <u>Design</u> Use different info sources. Consider purpose, audience, appearance. Consider conservation of materials. Use annotated sketches, lists. <u>Make</u> Mark out and cut accurately using standard measures. Use tools with greater accuracy and control. Use materials with awareness to functional qualities and conservation. Use a back stitch. <u>Technical knowledge</u></p>

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			<p>qualities and conservation.</p> <p><u>Technical Knowledge</u> Create mechanical structures – levers, linkages; pneumatics. Strengthen with diagonal struts.</p> <p><u>Evaluation</u> Evaluate against design criteria – purpose, appearance, conservation of materials. Evaluate, disassemble and analyse a range of existing products. Consider the view of others to improve work. Know about great designers/ inventors e.g. <u>Thomas Edison</u>, <u>Graham Bell</u>, <u>Isambard Kingdom Brunel</u>.</p>		<p>Select appropriate techniques to decorate textiles – sew on buttons, make loops, simple applique.</p> <p><u>Evaluation</u> Evaluate against design criteria – purpose, appearance, conservation of materials. Consider the view of others to improve work.</p>
<b>Cycle B - Term 1</b>	<b>Cycle B - Term 2</b>	<b>Cycle B - Term 3</b>	<b>Cycle B - Term 4</b>	<b>Cycle B - Term 5</b>	<b>Cycle B - Term 6</b>
<p><b>Around the World</b> <b>N/A</b></p>	<p><b>Wonderful Warriors</b> <b>Food &amp; Nutrition –</b> <b>Saxon/Viking Cooking –</b> <b>Biscuits</b> Follow a recipe. Measure ingredients to the nearest gram.</p>	<p><b>Ancient Greece -</b> <b>Legends</b> <b>N/A</b></p>	<p><b>Ancient Greece - Legacy</b> <b>Construction –</b> <b>Greek Temple</b> <u>3D</u> Use a frame to provide stability and form. Use recycled, natural and manmade materials</p>	<p><b>The Paradise Garden</b> <b>N/A</b></p>	<p><b>It's Not Easy Being Green</b> <b>Shell Structures</b> <u>Design</u> Use different information sources. Consider purpose, audience, appearance.</p>

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	<p>Prepare, assemble or cook ingredients hygienically. Talk about seasonality of food and how it is grown, caught and processed. Research products – which is the healthiest?</p>		<p>in imaginative ways to create sculptures. <u>Design</u> Use different information sources. Use annotated sketches, lists. Assemble and rearrange a range of materials and components to model ideas. <u>Make</u> Mark out and cut accurately using standard measures. Use simple joining, shaping and finishing techniques to construct products. Use tools with greater accuracy and control – saws, needles, knives. Use materials with awareness to functional qualities and conservation. <u>Evaluation</u> Evaluate against design criteria – purpose, appearance, conservation of materials. Consider the view of others to improve work.</p>		<p>Consider conservation of materials. Use annotated sketches, lists and CAD* (foldify). Plan a sequence of actions. Assemble and rearrange a range of materials and components to model ideas. <u>Technical Knowledge</u> Create shell structures - (nets, giftboxes, lunchboxes, packaging, party boxes...)</p>
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Emerald Class (Year 5 & 6) – Upper Key Stage 2					
Cycle A - Term 1	Cycle A - Term 2	Cycle A - Term 3	Cycle A - Term 4	Cycle A - Term 5	Cycle A - Term 6
<p style="color: red; text-align: center;"><b>Out of this World</b></p> <p><b>Mechanisms (cranes and grabbers)</b></p> <p><u>Design</u> Use a number of different sources to collect design ideas. Consider appearance, purpose, safety and reliability. Develop step by step plans and modify them as appropriate through discussion, drawing and modelling.</p> <p><u>Make</u> Mark out and cut accurately using standard measures and refine with appropriate tools. Demonstrate accuracy in techniques when joining, shaping and finishing.</p> <p><u>Technical Knowledge</u> Make mechanisms including pulleys, gears, cams.</p> <p><u>Evaluation</u></p>	<p style="color: red; text-align: center;"><b>The Great War (WW1)</b></p> <p><b>Cooking &amp; Nutrition (recipe planning)</b></p> <p>Create, prepare, cook/bake and refine a variety of recipes (ingredients, methods, cooking times, temperatures). Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. Understand the importance of correct storage and handling of ingredients (micro – organisms).</p> <p><u>Design</u> Consider cost and availability of materials. Consider appearance, purpose, safety and reliability.</p> <p><u>Evaluation</u> Evaluate my ideas, plans and products against design criteria – purpose, appearance, safety, reliability, cost and availability of materials.</p>	<p style="color: red; text-align: center;"><b>The Home Front (WW2)</b></p> <p><b>Structures (prototype bomb shelters)</b></p> <p><u>Design</u> Show understanding of qualities of materials to choose appropriate tools to cut and shape. Consider appearance, purpose, safety and reliability. Use annotated sketches, scale drawings, cross sectional drawings, exploded diagrams and prototypes when designing.</p> <p><u>Make</u> Use appropriate tools with accuracy and control</p> <p><u>Technical Knowledge</u> Make frame structures e.g. playground shelters, tents, gazebos, bird hide, playground equipment.</p>	<p style="color: red; text-align: center;"><b>Journey to Mecca</b></p> <p style="text-align: center;">N/A</p>	<p style="color: red; text-align: center;"><b>Sussex Landscape</b></p> <p style="text-align: center;">N/A</p>	<p style="color: red; text-align: center;"><b>Pirates and Smugglers</b></p> <p style="text-align: center;">N/A</p>

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Evaluate ideas, plans and products against design criteria – purpose, appearance, safety, reliability, cost and availability of materials. Test and evaluate work as it develops, making adjustments as necessary.	Consider the view of others to improve my work.	<u>Evaluation</u> Evaluate ideas, plans and products against design criteria – purpose, appearance, safety, reliability, cost and availability of materials.			
<b>Cycle B - Term 1</b>	<b>Cycle B - Term 2</b>	<b>Cycle B - Term 3</b>	<b>Cycle B - Term 4</b>	<b>Cycle B - Term 5</b>	<b>Cycle B - Term 6</b>
<b>The Amazing Americas</b>  N/A	<b>Victorians</b> <b>Electrical Systems (bridges with electrical mechanisms)</b> <i>(Science link – Electricity)</i> Use a number of different sources to collect design ideas. Consider appearance, purpose, safety and reliability. Use annotated sketches, scale drawings, cross sectional drawings, exploded diagrams and prototypes when designing. Develop design ideas – bridges with electrical mechanisms Demonstrate accuracy in techniques when joining, shaping and finishing.	<b>Secret Agents</b> <b>Structures (survival shelters)</b> <i>(Computing link)</i> <u>Design</u> Show understanding of qualities of materials to choose appropriate tools to cut and shape Demonstrate awareness of functional and aesthetic qualities, cost and availability of materials Use annotated sketches, scale drawings, cross sectional drawings, CAD** (Tinkercad), exploded diagrams	<b>Ancient Egypt</b> N/A	<b>Journey to the River Sea</b> <b>Mechanisms (automata animals)</b> <u>Design</u> Use a number of different sources to collect design ideas. Consider appearance, purpose, safety and reliability. Develop step by step plans and modify them as appropriate through discussion, drawing and modelling. <u>Make</u> Mark out and cut accurately using standard measures	<b>Freedom – The Slave Trade</b> <b>Textiles (Freedom Quilts)</b> <u>Design</u> Use a number of different sources to collect design ideas. Consider cost and availability of materials. <u>Make</u> Mark out and cut accurately using standard measures and refine with appropriate tools. Show an understanding of the qualities of materials to choose appropriate tools to cut and shape. Use a blanket stitch. <u>Technical Knowledge</u>

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	<p><u>Technical Knowledge</u> Create electrical systems e.g. switches, bulbs, buzzers, motors.</p> <p><u>Evaluation</u> Evaluate ideas, plans and products against design criteria – purpose, appearance, safety, reliability, cost and availability of materials. Test and evaluate work as it develops, making adjustments as necessary. Learn about and understand how key events and (diverse) individuals in design and technology have helped shape the world e.g. <u>Isambard Kingdom Brunel</u></p>	<p>and prototypes when designing.</p> <p><u>Make</u> Use appropriate tools with accuracy and control</p> <p><u>Technical Knowledge</u> Make frame structures e.g. playground shelters, tents, gazebos, bird hide, playground equipment.</p> <p><u>Evaluation</u> Evaluate ideas, plans and products against design criteria – purpose, appearance, safety, reliability, cost and availability of materials.</p>		<p>and refine with appropriate tools. Demonstrate accuracy in techniques when joining, shaping and finishing.</p> <p><u>Technical Knowledge</u> Make mechanisms including pulleys, gears, cams.</p> <p><u>Evaluation</u> Evaluate ideas, plans and products against design criteria – purpose, appearance, safety, reliability, cost and availability of materials.</p>	<p>Join textiles with a combination of joining and stitching techniques – blanket stitch, glue, press studs, velcro, zips, buttons.</p> <p><u>Evaluation</u> Test and evaluate work as it develops, making adjustments as necessary. Consider the view of others to improve my work.</p>
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\*<http://www.foldifyapp.com/> - free Computer Aided Design (CAD)

\*\*<https://www.tinkercad.com/> - free Computer Aided Design (CAD) resource suitable for primary schools – use CAD in UKS2 to progress to KS3